REMARKS

Claims 2-11, 13-22 and 28-43 are pending in the above-captioned patent application after this response. Claims 2-11, 13-22 and 28-43 have been rejected. The Applicant respectfully traverses the rejection of these claims as set forth herein.

No new matter has been added by this response. Consideration of the pending application is respectfully requested.

Rejections Under 35 U.S.C. § 102

Claims 2-11, 13-22 and 28-43 are rejected under 35 U.S.C. § 102(e) as being anticipated by Karasudani et al. (US 6,378,054). As provided above, the Applicant respectfully traverses the rejection of claims 2-11, 13-22 and 28-43 on the grounds that Karasudani et al does not teach or suggest the features of these claims.

Karasudani et al. is directed toward a data backup device 40 that includes a first storage section 20 (memory A) and a second storage section 30 (memory B). Data files stored in the first storage section 20 are stored in the second storage section 30 in a duplicated manner. (Col. 8, lines 54-59; emphasis added). Memory A 20 and memory B 30 are each configured in the form of external storage devices such as hard disks. (Col. 8, lines 59-61). Thus, Karasudani et al. uses two separate storage devices 20, 30 to store the duplicative copies of the same data, whether the data is compressed or uncompressed.

For example, Karasudani et al. teaches that the files in the first storage section 20 are analyzed by a selection section 101 of the CPU 10. The selection section 101 determines whether certain files in the first storage section 20 satisfy given conditions, such as having a particular maximum size. If the given conditions of certain data files are met, those certain files can be grouped together as an "archive file" from the first storage section 20, which is then copied in a duplicative manner to the second storage section 30 in compressed form. (Col. 14, lines 15-22; Figure 4). Files that do not satisfy the given conditions are simply copied without compression from the first storage section 20 to the second storage section 30, such as data files C and E. (Col. 14, lines 29-43; Figure 5). Karasudani et al. does not retrieve actual data files, compress these files and re-store

them, but instead duplicates files that are then compressed and stored.

In another embodiment, certain data files from the first storage section 20 are first compressed, then are combined into an archive file that is stored in the second storage section 30. (Col. 14, lines 44-57; Figure 6). Thus, in each embodiment, Karasudani et al. teaches that data files from one storage section 20 are duplicated as data files and/or an archive file in compressed or uncompressed form, to the other storage section 30. Karasudani et al. does not teach or suggest that data files from the first storage section are retrieved, compressed, and re-stored on the same backup storage device in a non-duplicative manner.

Karasudani et al teaches that data on a computer 1 undergoes a certain selection process 101, an archive creation process 102 and then a backup process 103 when data is backed up. These three steps are performed by the CPU 10. (See Figure 1). Karasudani et al teaches that data is copied from Memory A 20, and is backed up onto Memory B 30 in one form or another. (Figures 4 and 11-15; Col. 14, lines 20-22; Col. 16, lines 15-33; Col. 16, lines 42-53; Col. 17, lines 4-19; and Col. 18, lines 4-10). These Figures and the descriptions for each Figure clearly illustrate and describe that data from various files in the first storage device 20 is combined into an archive file that is then copied to the second storage device 30. Karasudani et al appears to be making the point that by combining a plurality of files from the first storage device 20, i.e. files A, B and D in Figures 4 and 5, into one single archive file which is then copied to the second storage device 30, time is saved because the single archive file only needs to be opened and closed one time. In contrast, if files A, B and D were copied separately to the second storage device 30, each file (A, B and D) would need to be opened and closed separately, thereby taking more time. In any event, Karasudani et al does not teach or suggest that data is retrieved from Memory A 20, compressed, and then re-stored back in Memory A 20.

Moreover, Karasudani et al is completely silent on the timing of this copying from the first storage device 20 to the second storage device 30 relative to data being copied to the first storage device 20 from the computer 1. Stated another way, Karasudani et al does not teach or suggest that copying of data from the first storage device 20 to the

second storage device 30 can only occur when data is not being copied to the first storage device from the "source" (Figure 19), or from the "source" to the "destination". In Karasudani et al, the source is the computer 1, and the destination is the first storage device 20.

Further, and more importantly, Karasudani does not teach or suggest that retrieval of data from the first storage device 20, compression of this data, and re-storage of this compressed data back onto the first storage device 20 ever occurs, let alone that it occurs during an idle period that begins following a predetermined time period of inactivity through an input/output port of the computer.

In addition, Karasudani does not teach or suggest that retrieval of data from the first storage device 20, compression of this data, and re-storage of this compressed data back onto the first storage device 20 ever occurs, let alone that it occurs during an idle period when uncompressed data from the computer is not being copied in uncompressed form to the first storage device 20.

Also, Karasudani does not teach or suggest that retrieval of data from the first storage device 20, compression of this data, and re-storage of this compressed data back onto the first storage device 20 ever occurs, let alone that a controller terminates this process once data transmission through the input/output port occurs.

In contrast to Karasudani et al, claim 28 is directed toward a storage system that requires "a primary storage location including an input/output port; a backup storage device; and a controller that transmits data between the primary storage location and the backup storage device according to a duty cycle having a predetermined backup window period when uncompressed data from the primary storage location is copied to the backup storage device, and an idle period when uncompressed data from the primary storage location is not being copied in uncompressed form to the backup storage device; wherein during the idle period the controller retrieves the uncompressed data stored on the backup storage device, compresses the retrieved data, and then re-stores the compressed data on the backup storage device." These features are not taught or suggested by the Karasudani et al. Thus, claim 28 is believed to be allowable. Because claims 29-30 depend from claim 28, they are also believed to be allowable.

Claim 31 requires "a primary storage location including an input/output port; a backup storage device; and a controller that copies uncompressed data from the primary storage location to the backup storage device during a predetermined backup period, and retrieves the uncompressed data from the backup storage device, compresses the retrieved data, and then re-stores the compressed data on the backup storage device during an idle period that begins following a predetermined time period of inactivity through the input/output port." These features are not taught or suggested by Karasudani et al. Thus, claim 31 is believed to be allowable. Because claims 13-22 depend directly or indirectly from claim 31, they are also believed to be allowable.

Claim 32 is directed toward a computer-implemented method that requires the steps of "copying uncompressed data during a predetermined backup window period from the primary storage location to the backup storage device; compressing the data with a controller during an idle period defined by when uncompressed data is not being copied from the primary storage location to the backup storage device; and re-storing the compressed data onto the backup storage device during the idle period." These steps are not taught or suggested by Karasudani et al. Thus, claim 32 is believed to be allowable. Because claims 2-11 and 33-35 depend directly or indirectly from claim 32, they are also believed to be allowable.

Claim 36 is directed toward a computer-implemented method that requires the steps of "copying uncompressed data from the primary storage location through the input/output port to the backup storage device; compressing the data copied to the backup storage device with a controller during an idle period that begins following a predetermined time period of inactivity through the input/output port; and re-storing the compressed data onto the backup storage device with the controller during the idle period." These steps are not taught or suggested by Karasudani et al. Thus, claim 36 is believed to be allowable. Because claims 37-42 depend directly or indirectly from claim 36, they are also believed to be allowable.

In contrast to Karasudani et al, new claim 43 is directed to a storage system that requires "a primary storage location including an input/output port; a backup storage device; and a controller that transmits data between the primary storage location and

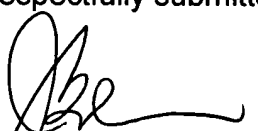
the backup storage device according to a duty cycle having a backup window period and an idle period, the controller transmitting uncompressed data from the primary storage location for copying to the backup storage device during the backup window period, the controller determining initiation of the idle period based on a predetermined time period of inactivity of data transmission through the input/output port and terminating the idle period once data transmission through the input/output port occurs; wherein during the idle period, the controller initiates (i) compression of uncompressed data stored on the backup storage device, and (ii) restorage of compressed data onto the backup storage device." These features are not taught or suggested by Karasudani et al. Thus, claim 43 is believed to be allowable.

Conclusion

In conclusion, the Applicant respectfully asserts that the rejection by the Patent Office of claims 2-11, 13-22 and 28-43 should be withdrawn and these claims should be allowed. The Applicant submits that the application is in condition for allowance. Accordingly, an early notice of allowance is respectfully requested. The Examiner is requested to call the undersigned at 858-487-4077 for any reason that would advance the instant application to issue.

Dated this 24th day of January, 2007.

Respectfully submitted,



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